

10:33:23

OCA PAD INITIATION - PROJECT HEADER INFORMATION

11/06/87

Active

Project #: A-54-807
Center # : U5037-0A0

Cost share #: SEE BUDGET INFO
Center shr #: K5037-0A0

Rev #: 0
OCA file #:
Work type : INST
Document : GRANT
Contract entity: GIT

Contract#: G008715838
Prime #:

Mod #:

Subprojects ? : N
Main project #:

Project unit: GRAD STUD Unit code: 03.010.461

Project director(s):

GRENGA H E

~~GRAD~~ GRAD STUD

Sponsor/division names: US DEPT OF EDUCATION
Sponsor/division codes: 144

/ GENERAL
/ 000

Award period: 871001 to 880930 (performance) 881231 (reports)

Sponsor amount	New this change	Total to date
Contract value	103,306.00	103,306.00
Funded	103,306.00	103,306.00
Cost sharing amount		42,941.00

Does subcontracting plan apply ? : N

Title: GRADUATE CO-OP PROGRAM

PROJECT ADMINISTRATION DATA

OCA contact: Brian J. Lindberg

894-4820

Sponsor technical contact

Sponsor issuing office

DR. STANLEY PATTERSON, DIRECTOR
(202)732-4393
COOPERATIVE EDUCATION PROGRAM
U.S. DEPARTMENT OF EDUCATION
WASHINGTON, D.C. 20202

BARBARA SAUNDERS, GRANTS SPECIALIST
(202)732-2630
TRAINING & FELLOWSHIP GRANTS BRANCH
U.S. DEPARTMENT OF EDUCATION
WASHINGTON, D.C. 20202

Security class (U,C,S,TS) : U

ONR resident rep. is ACO (Y/N): N

Defense priority rating : N/A

N/A supplemental sheet

Equipment title vests with: Sponsor GIT

NO PURCHASE OR LEASE OF EQUIPMENT, UNLESS APPROVED BY THE SEC. OF EDUCATION.

Administrative comments -

FUNDING IS FOR THE FIRST YEAR ONLY OF A PROPOSED FIVE YEAR GRANT. ADDITION
YEARS FUNDING DEPENDENT UPON SEVERAL FACTORS AS OUTLINE IN ITEM 9.E OF GRANT

December 8, 1988

U.S. Department of Education
Fellowship and Training Grants Branch
GCS, Grants Division, Branch C
Room 3653, ROB-3, Mail Stop 3335
Washington, DC 20202

Ladies and Gentlemen:

We are pleased to submit the enclosed Performance Report for Grant No. G008715838. This report covers the first budget year (10/1/87 - 9/30/88) of the five year project period.

If there are any questions or if additional information is needed, please let me know.

Sincerely,

Helen E. Grenga
Director

U.S. Department of Education
Washington, D.C. 20202

Form Approved
OMB No. 1840-0053
Approval Expires: 3/91

COOPERATIVE EDUCATION PROGRAM
(Title VIII, H.E.A. of 1965, as amended)

PERFORMANCE REPORT - Program Year 1987-1988

PART I - TO BE COMPLETED BY ALL GRANTEES

a) Name and address of grantee	b) Grant Number																		
Georgia Institute of Technology Office of Graduate Studies and Research Savant Building Atlanta, Georgia 30332-0265	G00- 8715838																		
	c) Budget Period Covered by Report																		
	<table border="1"><thead><tr><th colspan="3">From</th><th colspan="3">TO</th></tr><tr><th>Month</th><th>Day</th><th>Year</th><th>Month</th><th>Day</th><th>Year</th></tr></thead><tbody><tr><td>10</td><td>01</td><td>87</td><td>09</td><td>30</td><td>88</td></tr></tbody></table>	From			TO			Month	Day	Year	Month	Day	Year	10	01	87	09	30	88
From			TO																
Month	Day	Year	Month	Day	Year														
10	01	87	09	30	88														

PART II - TO BE COMPLETED BY ADMINISTRATION PROJECTS AND DEMONSTRATION PROJECTS (where applicable). Your answers to each item must reflect the activities and accomplishments of your project for the budget period as entered in Part I, item c. IMPORTANT: EXCEPT FOR ITEM 1 OF THIS PART, PROVIDE DATA IN ITEMS 2 through 13 ONLY FOR THE FUNDED PORTION OF YOUR CO-OP PROJECT. COUNT ONLY THOSE CO-OP STUDENTS WHO WERE SERVED WITH FEDERAL AND MATCHING FUNDS UNDER YOUR GRANT.

	Responses
1. Give the total number of co-op students enrolled in your entire co-op program, even if they were not served under the terms of your grant. See definition of "enrolled" in the program regulations, section 631.5(b).	241
2. Give the number of students enrolled in your funded co-op project.	241
3. Show the increase (+) or decrease (-) in the number of co-op students enrolled (as shown in item 2) compared with the previous year.	93
4. Give the number (headcount) of co-op students your project placed in co-op jobs.	145
5. Show the increase (+) or decrease (-) in the number of co-op students placed (as shown in item 4) compared with the previous year.	86
6. Of the number of co-op students enrolled (as shown in item 2), give the number who are also enrolled as certificate candidates at your institution.	0
7. Of the number of co-op students enrolled (as shown in item 2), give the number who are also enrolled in graduate or professional programs (post-baccalaureate) at your institution.	221
8. Were all co-op students placed in jobs related to their academic programs of study or career objectives? If not, explain in narrative under Part I, item 13.	(check one) <input checked="" type="checkbox"/> yes <input type="checkbox"/> no

PART II - Continued		Responses
9. Of the number of students placed (as shown in item 4), give the total amount of income co-op students earned from co-op employment during the budget period.		\$1.7 million
10. Number of co-op students who, for reasons related to the co-op project, dropped out of the co-op project during the budget period after receiving at least one co-op work placement.		0

11. Student characteristics. Give the number of co-op students enrolled in your co-op project by the following characteristics: (Totals must equal the figure given in item 2.)

a. Ethno-Racial Background	Number of Students	b. Gender	Number of Students
American Indian/Alaskan Native	0	Female	33
Asian/Pacific Islander	47	Male	208
Black (not of Hispanic origin)	8	TOTAL-Gender	241
Hispanic	12		
White (not of Hispanic origin)	174		
TOTAL - Ethno-Racial	241		

12. Number of employers (Firms/Organizations) where students were placed. (This number may be less than the total number of employers with whom the institution has co-op work agreements).	98 (number)
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13. Attach a narrative statement comparing your project's objectives and activities, as proposed in your approved grant application, with the level of accomplishment attained for each objective and activity. If a planned objective or activity was not attained or conducted, explain why and what, if any, corrective measures were taken. Also explain the extent of participation of each unit of an Administration grant included in your approved application. Attach a copy of any evaluation reports prepared for your project during or immediately after the budget period.

If this report is for the last budget period of a multi-year approved project, the narrative statement should also summarize the overall accomplishments, strengths, and weaknesses of your project over the entire approved project period.

PART III - TO BE COMPLETED BY TRAINING AND RESOURCE CENTER PROJECTS

1. On a separate sheet of paper, list each training workshop conducted during the budget period stated in Part I, item c, along with the primary purpose of each workshop, the city and state where each workshop was held, the number of persons conducting the training, and the number of participants who attended the training workshops. Summarize the strengths and weaknesses of the training conducted.
2. Attach a narrative statement comparing the project objectives and activities, as proposed in your approved grant application, with the level of accomplishment attained for each objective and activity. If any objective or activity was not attained or conducted, state the objective or activity and give reasons for changes or slippage.

PART IV - TO BE COMPLETED BY RESEARCH PROJECTS

1. As proposed for the budget period given in Part I, item c, has the research been completed in accordance with the grant agreement?

_____	yes
_____	no
2. Attach a narrative statement on one of the following:
 - a. If the research has been completed, provide a brief summary of your findings and attach five copies of the final report.
 - b. If you accomplished the objectives of your research project for this budget period in accordance with your grant agreement but the research is still incomplete, explain the current status of the research and give the expected date of completion. (Applies to multi-year grantees.)
 - c. If your objectives were not met, explain the status of your project and the reasons why the objectives were not met. Give the reasons for the slippages in the schedule and provide a timetable for completion.

PART V - AUTHORIZED SIGNATURE AND DATE (To be completed by all grantees)

I certify that the information in this report is accurate and complete and that all the terms and conditions of the grant have been satisfactorily completed to the best of my knowledge and belief.

Signature of Authorized Official

Helen E. Grenga
Typed Name of Authorized Official

Assistant Vice - President

December 8, 1988

Title

Date

**Georgia Institute of Technology
Graduate Cooperative Program**

PERFORMANCE REPORT

First Budget Period

October 1, 1987 - September 30, 1988

E.D. Grant Number G008715838

Project Number 055AH70134

Part II. Narrative

I. Project Accomplishments during the First Budget Period

Project objectives and activities, are given in the grant application, with the level of accomplishment attained during the first year are as follows:

A. Emphasize external program development and develop graduate level co-op positions.

An average of approximately 30 Company personnel or technical managers have been visited or have visited Graduate Co-op coordinators each quarter. Approximately 75 Company sites were visited during the year, 55 of these in the state of Georgia. Eleven faculty members were involved in these visits.

The Graduate Co-op Program has been promoted with Corporate Liaison member companies through letters, brochures, telephone calls and visits. Employer information pamphlets have been widely distributed through various campus offices, including the academic units, Placement Center, undergraduate Cooperative Division and others. Approximately 500 Employer Information brochures have been distributed this year.

There were 40 new companies added to the program this year for a total of 260 companies in our graduate co-op program.

B. Promote Cooperative Education with Graduate Students.

The Graduate Co-op Program has been widely advertised to students.

Faculty members inform their graduate classes and research groups about the opportunities students have in the Graduate Co-op Program. Graduate Co-op Student Information brochures are distributed to the students through the academic units, faculty and the Graduate Co-op Office.

Graduate Co-op personnel have met with both black and women student groups and women student groups to encourage their participation in the program. The Graduate Co-op Director is the advisor for the Graduate Student Government and periodically updates them about the program. An informative presentation about the Graduate Co-op program held annually at the Graduate Student Orientation.

Promotional information is sent to students throughout the year. Specific job openings are periodically mailed to the appropriate groups of students. Approximately 4,000 flyers about the program and various job opportunities were sent to students this year. Bulletin boards in the academic units and Graduate Office are also used for posting co-op information.

Articles about the Graduate Co-op Program appear periodically in various publications, including the student newspaper, the alumni magazine, and the undergraduate co-op newsletter.

Brochures and posters are widely distributed through schools and companies. The graduate application form has a section for students to indicate interest in receiving information about the program. Approximately 6,000 student brochures and 500 posters have been distributed this year.

Information about the Graduate Co-op Program is included in a wide range of Institute publications, including the General Catalog, the Guide to Graduate Studies and individual brochures of the academic units. Information on this program

is also included in the on-line computer data base of financial assistance for graduate students, which all students can access.

C. Involve Faculty at a High Level of Participation.

The Graduate Co-op staff meets monthly with the Co-op Faculty Coordinators, Lucio Charaviglio and Lanny Feorene, to discuss the program status and continually develop strategies for program development.

The Graduate Co-op Director regularly attends meetings of the Graduate Coordinators and the Graduate Committee and periodically reports on the status of the Graduate Co-op Program. Presentations have also been made at a number of faculty meetings of individual academic units.

A faculty workshop on the Graduate Co-op Program was held in the Spring this year for representatives from all of the academic units. The workshop agenda included presentations on program background, current status, faculty coordinator activities and a panel discussion on benefits of the program. Presentations were made by faculty whose students are performing thesis research or special problems during their co-op assignments and by faculty whose students are using the program for non-thesis industrial experience. One of the additions that will be made to this program for next year will be to include graduate co-op students in the presentations.

Faculty involvement, however, occurs continuously throughout the year. The co-op office frequently coordinates meetings between faculty members and company representatives both on-campus and at the company site. There have been well over 100 such contacts initiated during this year.

Approximately 11 faculty have been involved in about 55 visits with company representatives. Twenty of these visits were to the company site.

As evidence of strong faculty support and participation, two recent developments are worth noting: (1) the Institute's Graduate Committee is currently studying methods to better

recognize students who complete the program, either by a degree designation or additional transcript designation;

(2) The faculty International Affairs sub-committee of the Institute's Restructuring Committee is recommending an International Graduate Co-op Program (within the current Graduate Co-op Program) to provide international experiences for our graduate students.

D. Provide Career Counseling for Students.

Students are advised and assisted in completing the application/resume form. After the student is admitted to the program, the program director or coordinator and the student discuss the student's work interests and identify companies of potential interest to the student. The student prioritizes the companies of interest and copies of the student's resume and transcript are sent to the student's top choices. Students may also add companies to the list for the Co-op Office to contact on the student's behalf; this frequently leads to new co-op company participation. The student develops the learning contract in consultation with the Co-op Office, faculty and company representative and submits a study-work schedule prior to the beginning of the first co-op work quarter.

A library of information concerning co-op opportunities, including job descriptions and company literature is located in the Graduate Co-op Office. This library and the larger Placement Center library are both used by the students to help clarify their career interests as well as to identify companies and/or specific jobs of interest.

E. Stress Academic Enrichment and Achievement

The Graduate Cooperative program is designed purposefully to incorporate maximum flexibility in order for the faculty and students to use it for maximum benefit with respect to the academic programs while at the same time offering companies a variety of ways to participate in the educational process through this program.

Some companies, students and academic units wish only to participate for the industrial experience gained by graduate co-op students. In this case, the program is similar to the

traditional undergraduate program, providing all three participants with interactions that enrich the student's academic program. The work periods, however, are not necessarily scheduled on an alternating quarter basis. These students also enhance the graduate classroom experience of non co-op students in the same way that undergraduate co-op students contribute practical experiences to undergraduate classes.

The Graduate Cooperative Program is used to obtain academic credit if the student does some or all of the thesis research or special problem assignment at work. In these cases, faculty members are directly involved with the company supervisor of these students.

Another model of the Graduate Cooperative Program is that in which a company sponsors a research grant on which the graduate co-op student is a research assistant performing thesis research at school; the student then spends work periods with the sponsoring company to become more involved in and knowledgeable about the application of this research.

Visits are regularly made to companies employing graduate co-op students to assess the quality of the co-op work experience and to provide helpful suggestions to the employer. This year 35 visits were made to co-op employment sites.

F. Ensure Growth of the Graduate Co-op Program

Efforts to increase the number of student and company participants during this first project year have been very successful, as the following statistics show.

Students:

Number Applicants	197
Number Accepted	190
Total program enrollment:	241
Number new students placed:	93
Total students placed:	145
Total number student work quarters:	272
Total earnings by co-op work:	\$1,700,000

Companies

Number of new companies:	40
Total number companies:	260
Number companies with new placement:	36
Total number companies with placement:	98

A comparison of these numbers with the stated grant objectives shows that the project has exceeded expectations during the first project year.

While the enrollment (241) was slightly less than the goal of 248, placements (145) exceeded the goal of 100 and the number of employers with co-op students (98) exceeded the goal of 60.

Project Summary
January 11, 1988

A. Status and Accomplishments

The original proposal gave specific objectives for each of five areas: (1) External Development, (2) Student Promotion, (3) Faculty Involvement, (4) Counseling for Students, (5) Academic Enrichment and (6) Growth. Activities to meet these objectives are proceeding on schedule as given in the proposal. A copy of these objectives is attached. Only a few brief highlights are given below.

The two faculty coordinators have been appointed. They are Dr. Lucio Chiaraviglio and Mr. Orlando J. Feorene. Dr. Chiaraviglio is Professor and Associate Director of the School of Information and Computer Science. He came to Georgia Tech in 1969. He is highly respected by students and faculty and has extensive interactions with industry. He is Chairman of the 1988 ACM Computer Science Conference which will be held in Atlanta in February. As a coordinator, Dr. Chiaraviglio will be working with all academic units to promote the Graduate Co-op Program. Initially, however, his emphasis will be in Computer Science, which has our second highest graduate student enrollment (Electrical Engineering is highest). He has begun promoting the program to enrolled students as well as to students who are applying for graduate admission and is visiting a number of computer companies to develop our program with them.

Mr. Feorene has a joint appointment as Principal Research Engineer in the College of Engineering and the Georgia Tech Research Institute (GTRI). He has extensive interactions with companies dealing with advanced manufacturing and production technologies as well as with GTRI regional field offices located throughout Georgia and part of Alabama. GTRI is a separate research arm of Georgia Tech which performed more than \$70 million of sponsored research in Fiscal Year 1987, most of it in applied areas. Undergraduate and graduate co-op students are employed by GTRI. GTRI field offices work with industries and businesses in their regions to help solve technical and economic problems. As a faculty coordinator, Mr. Feorene is promoting the Graduate Co-op Program with various companies, especially in the manufacturing and production areas. He will help coordinate any required faculty interaction with these companies to provide their support in identifying students for these co-op positions. Contact has also been made with GTRI regional field offices and they are helping to arrange visits with companies in their regions to develop co-op jobs.

Both Dr. Chiaraviglio and Mr. Feorene are enthusiastic about their involvement in the Graduate Co-op Program. Monthly meetings are held with them and the Graduate Co-op staff. They are also assisting with the development of additional publications aimed at faculty, students and companies. They will be leading the faculty workshop on graduate co-op, which is planned for early Spring Quarter.

In addition to the activities given in the original proposal (all of which are proceeding on schedule) two additional activities should be mentioned. The faculty coordinators and staff are also working on documenting successes of the Graduate Co-op Program with input from students, faculty and companies so that a promotional brochure can be published. The other activity not covered in the proposal is the inclusion of information about the Graduate Co-op Program (how it works, how to apply, job listings, etc.) on the Georgia Tech Computer network, which can be accessed by all students and faculty. These two additional activities should be accomplished during the next project period.

With respect to student placement goals, forty new student placements have been made since the project began. At this rate the goal of 100 new placements for the first project year should be readily attained. Thus far, during this project year 142 placed students have been enrolled in the program. An additional 50 students, for whom placement is currently being sought, have been admitted to the program.

B. Objectives for the Next Budget Period.

Continuation of the specific activities and objectives cited in the original proposal as well as the two additional activities cited above are planned for the next budget period. A copy of these objectives from the original proposal is attached.

C. Problems.

There are no existing or currently anticipated problems with the project.

ATTACHMENT I
EXCERPTS FROM ORIGINAL PROPOSAL

(b.2.) Measurable Objectives - During the first year of federal funding, the objectives of the proposed graduate cooperative education project at Georgia Tech are:

To emphasize external program development and to develop graduate level co-op positions.

- 1.) To visit ten personnel specialists per quarter with Georgia and national firms to promote graduate co-op placements.
- 2.) To heavily promote graduate student co-op placements in twenty-five member companies of Georgia Tech's Corporate Liaison Program and 850 public and private employers that annually visit the Institute's Student Placement Center.
- 3.) To mail a promotional packet each year on graduate cooperative education to larger business, industry, and governmental agencies in the southeastern states.

To promote Cooperative Education with graduate students:

- 1.) To speak to graduate classes each quarter about the advantages of cooperative education.
- 2.) To work with the student government association to develop activities that would encourage a large enrollment of graduate students and to especially target minority and underrepresented groups for enrollment in the co-op program.
- 3.) To annually mail a promotional cover letter and co-op brochures to each graduate student enrolled at Georgia Tech.
- 4.) To frequently advertise the graduate co-op program in the schools newspaper and on bulletin boards across the campus.

To involve faculty at a high level of participation:

- 1.) To meet each quarter with graduate faculty co-op coordinators on a regular basis to develop a closer relationship and to solve problems as they arise.
- 2.) To sponsor at least one faculty workshop per year on the role of the graduate faculty in cooperative education.

To provide career counseling for students:

- 1.) To assist each graduate student enrolled in Cooperative Education in preparing dossiers, and negotiating learning contracts with graduate faculty members and faculty members and faculty co-op coordinators.
- 2.) Establish a portion of the Office of the Graduate School as a career resource area for graduate students to work independently to clarify academic/career interest before placement.

To stress academic enrichment and achievement:

- 1.) To assist graduate students in receiving academic credit for their participation in the co-op program.
- 2.) To use learning contracts in the graduate co-op program as a means of developing co-op work objectives.
- 3.) To appraise the quality of at least five graduate co-op training stations each quarter and provide suggestions to employers for improvement.

To ensure growth in the graduate co-op program:

- 1.) To place 100 new students in the graduate co-op program during the first year of operation and to expand the level of participation to 300 by the third year and by the fifth year to enroll 500 graduate co-op students. By the end of the fifth year, 500 student placements would represent 20 percent of the graduate student population which is the targeted penetration rate.
- 2.) To place graduate co-op students with at least 60 public and private employers during the first year and at least 150 by the third year and 300 by the fifth year.

Similar objectives will continue to be modified as appropriate in subsequent years. The accomplishment of the above objectives will assist in fulfilling the aim of not only the co-op concept but a major educational goal of Georgia Tech.